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TRANSLATIONS ON ENVIRONMENTAL QUALITY

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PEOPLE'S REPUBLIC OF CHINA

'KYODO' CORRESPONDENT DESCRIBES PRC ANTIPOLLUTION EFFORTS

Tokyo KYODO in English 1024 GMT 30 Jul 78 OW

[Article by KYODO correspondent]

[Text] Tokyo, 3 Jul, KYODO--"Environmental pollution has become a problem for China too. Atmospheric pollution as a result of dust and soot is particularly serious." Wang Tsung-chieh, chief of the State Council's General Office of the Environmental Protection leading group, made this admission to seven members of a Japanese Government environmental problem delegation that recently concluded a 2-week tour of Chinese factories, petrochemical plants, and research facilities for the prevention of pollution.

Wang told the group, including this correspondent, that air pollution is so serious in some industrial areas that large numbers of people suffer from chronic respiratory ailments. Wang said that 8 million tons of coal is burned in Peking every year, and that smoke pollution is especially bad in the winter when half the 990,000 households in the city use charcoal briquettes to heat their homes. Photochemical smog is a problem that China too will have to deal with in the future, Wang said.

We were given a graphic example of industrial pollution in a visit to an electrode carbone factory in the suburbs of Shanghai. Officials indicated how coal used as the raw material produced 1,000 tons of dust every day that is blown out of the factory and damages agriculture fields in the vicinity. The officials said that between the construction of the factory in 1959 and 1974 they had paid out yen 4 million in compensation to pollution victims, not a small sum considering that the average monthly wage of a laborer is yen 6,000. However, they added that this year pollution prevention measures have pulled compensation payments down to yen 260,000, and that they are determined to reduce pollution to zero in the future. We were also told that the release of liquid wastes into waterways has created pollution problems in the Yangtze and Yellow rivers and other major lakes and waterways.

The Chinese cities visited by the delegation were rich with trees and plants, but there was a surprising absence of birds, a fact delegation members surmised could be the result of China's liberal use of BHC and DDT, pesticides which are banned in Japan.

This guess was backed up when officials of the Science Academy Environmental Chemistry Research Laboratory informed us that the spraying of BHC and had been found to cause damage to some agricultural products. However, if China has found that pollution is an unwelcome escort to industrial development, the nation is now determined with all the fervor of a political movement to control and even reuse liquid, solid, and gas wastes.

Shanghai, a city of 5.5 million people and an industrial center with more than 10,000 factories, is filled with such polluters as metal-plating, chemical, metallurgy, shipbuilding, and textile plants. But as a result of a concerted effort to turn waste products from a minus to a plus for the city, Shanghai is blessed with extremely fresh skies and waters. Officials of the Shanghai General Office of Environmental Protection said that 1 to 2 million tons of resources are recovered from city waste materials every year. They are able to recover 90 percent of the sulphuric acid given off by factories, and have developed a method which cuts the use of mercury in the city's caustic soda factories by 600 kilograms a year. The city now recovers 1,000 tons of coal dust and 200 tons of hydrochloric acid, 90 percent of the total for those wastes, from factories every year.

The Chinese also took the delegation to the northern city of Harbin to show a boiler factory which obtains all its fuel from a coal-gas works located on the premises. The delegation saw how the toxic phenol generated with the production of the gas is disposed of by means of bacteria counteragents.

An official at the plant said that while the system is still in the experimental stage, they have succeeded in reducing phenol in waste liquids from 15,000 to 0.5 parts per million (ppm). The Chinese drive to combat and utilize industrial wastes was also seen in a Harbin electrical-instrument factory where 3,000 to 4,000 tons of water is conserved every year by recovering chrome used in electro-plating, and in a Changchun railcar factory where dust and metal particles are collected and transported to a brick factory. Various uses are also found for private garbage. In Shanghai there are 2,000 workers collecting 3,000 tons of garbage a day, which is divided into edible scraps for livestock feed, nonburnable waste, and disintegrative wastes. The last category is carried by ships to farming communities where the waste is fermented and used as fertilizer to moderate the quality of the soil.

The Chinese have always been adept at using their resources to the fullest extent possible, and while the effort to make comprehensive use of waste materials is still at a very basic level, it appears effective as a pollution control method suiting the industrial development system unique to China. China's model city for the "new type of socialist system oil fields" is Taching in northern Helungkiang Province, where huge petrochemical complexes stand next to wide potato fields and pastures for cows and horses.

Environmental officials told the delegation that the Taching type system has broken new ground in its effort to join the city and rural communities,

to combine industry and agriculture, in the total management plan of the area. As an example of this harmony between oil fields and potato patches they conducted a tour of facilities where natural gas contained in the crude oil and polluted water are separated and the water is led back down inside the earth. They said that not only does this prevent the polluted water from escaping into nearby farms, but it also helps maintain the necessary water pressure to bring the oil up to the surface of the earth.

The Japanese delegation was somewhat dubious of statements that the petroleum complex in Taching has already solved the problem of nitrous oxide emissions, but the Chinese guides were quick to admit that Taching still has a long way to go in preventing pollution, particularly the contaminating of the atmosphere.

Environmental protection group chief Wang was also unequivocal in stating that just as China's technological level is still 10 to 20 years behind the industrialized West--its pollution-control industry lags far behind more industrially advanced nations. But Wang said that for that very reason China has taken a strongly positive position toward preventing damage to its environment.

Language stating the importance of environmental protection was incorporated into the new constitution passed by the Fifth People's Congress this year, and Wang said that as a consequence of this all new buildings in China must now comply with the "three simultaneous actions" policy. This policy dictates that permission for the construction or operation of a factory will be refused unless the builders take appropriate pollution-prevention measures at the time the factory is planned, constructed, and begins production. Wang said that problems still remain in older plants, such as the Shanghai carbon factory where half the funding for pollution controls has had to be supplemented by the city revolutionary committee.

The city of Peking, whose winds and water flow generally move from north to south, is now trying to make factories move to the southern part of the city to alleviate some of its pollution headaches. But Wang said the antipollution campaign in China is hampered by some factories which have been less than enthusiastic in following the new directives. On the academic level, the Academy of Science Environmental Chemistry Research Laboratory in Peking is now carrying out extensive projects in improving the precision of its analyses.

During the 2 week visit, the delegates were impressed by the fact that differences in the political and industrial systems of China and Japan did not preclude learning valuable lessons from the Chinese experience. Delegation chief Yosiko Otaka, Environment Agency parliamentary vice minister, said Japan could do well by imitating the spirit of China's "three simultaneous actions" policy.



## INTERNATIONAL AFFAIRS

### BRIEFS

GDR-CSSR ENVIRONMENTAL TALKS--Hans Reichelt, deputy chairman of the GDR Council of Ministers and minister of environmental protection and water management, was received by Jindrich Zahradnik, deputy premier of the CSSR Council of Ministers in Prague on Wednesday 12 July. Cooperation between the two fraternal countries in environmental protection was the subject of the talks, in which Ladislav Supka, CSSR minister of technological and investment development, participated. Questions of cooperation in this field had earlier been the subject of consultations with Minister Supka. During the 3-day talks, which were concluded on Wednesday, both sides defined joint steps for solving the problems discussed. [Text] [East Berlin NEUES DEUTSCHLAND in German 13 Jul 78 p 2 AU]

CSO: 5000

PROGRESS IN AIR POLLUTION CONTROL OUTLINED

Sofia TRUD in Bulgarian 22 Jul 78 p 2

[Article by Georgi Pavlov, chairman of the Council of Ministers Committee for the Protection of the Environment: "On the Construction and Work of Air Treatment Installations"]

[Text] The Bulgarian Communist Party and the people's government have always paid exceptional attention to environmental protection, for this is a problem affecting the basic interests of the working people.

The establishment of the Committee for the Protection of the Environment as a supradepartmental autonomous specialized control organ of the Council of Ministers was a turning point in the struggle for the solution of this problem in our country. A reorganization was undertaken of all activities aimed at environmental protection and basing it on an organized planned foundation for the comprehensive solution of this vitally important problem in the spirit of the Eleventh Party Congress, July BCP Central Committee Plenum, and the specific instructions issued by Comrade T. Zhivkov. Extensive measures have now been adopted to implement the decisions of the National Party Conference.

Together with the leaderships of ministries, okrug people's councils, scientific-production trusts, and enterprises, measures were taken to provide designs, and to sign contracts for the building and delivery of machines and installations, financing, and prompt initiation of the construction of new treatment installations. Specific programs and schedules were drawn up on measures to improve the treatment results of poorly working installations.

The results are already beginning to be felt. Whereas at the end of 1976, 89 dust tapping and gas filtering installations were not operational, thanks to the adamant efforts and control, at the end of 1977 their number was reduced to 36; by 30 May 1978 it had been lowered to 26. A bag filter was installed at the D. Blagoev Nonferrous Metals Combine in Plovdiv, two bag filters were installed at the Vl. Zaimov Cellulose Plant in Pleven, electric filters at the Bobov Dol TETs, and gas treatment installations were mounted at the fourth and fifth roasting kilns of the Kremikovtzi Metallurgical Combine; a dust tapping installation was built at the Rilski Len

Combine in Samokov for the primary processing of flax, and others. These installations are already operating adequately.

No new plants, shops, or other production capacities could be commissioned without securing the tapping and sanitizing of released harmful substances. For the past 18 months no single project has been commissioned without treatment installations.

At the present stage the most effective means for the purification of the air must be sought. Modern wasteless technology must be applied more daringly and on a priority basis. For example, it would be expedient for the leather and oil extraction plants to use animal fat; the slaughterhouses should use the blood; the waste of yeast plants could be used as fodder and fertilizer. A number of possibilities exist in this respect which must be found and utilized.

We have already begun to use such technology at the G. Dimitrov Metallurgical Combine in Eliseyna, for useful products such as sulfuric acid, sodium sulfate, and others will be produced from sulfur dioxide, metal aerosols, and others. At the G. Damyanov Metallurgical Combine in Srednogorie work is being done to tap lean sulfur containing gases which will be concentrated and used. The results of the application of this new wasteless technology will be considerable, for the volume of released gases and lead aerosols will be kept within the admissible norms and the production of over 150,000 tons of sulfuric acid per year will become possible.

Also of exceptional importance is the question of the equipment mounted on the treatment installations. This largely depends on their filtering effect. The situation related to mastering the production of new items is alarming. The 1977 plan called for mastering the production of seven new items yet only three were applied. Half the year is already gone yet not one of the nine new planned goods to be developed within the system of the Committee for Heavy Investment Machine Building has been completed.

Both in 1977 and 1978 the Ministry of Machine Building, the Committee for Heavy Investment Machine Building, and the managements of the economic combines have failed to take adequate measures for the overall implementation of the tasks based on government orders for equipment supplies. Greater persistence must be displayed in this respect in order to surmount difficulties related to procurements of imported equipment and prevent violations of target programs for the projects.

Every year the country's industrial enterprises release in the air about 3,700 tons of harmful substances. Funds allocated for the protection of the environment must not be used for other purposes so that such substances may be tapped and rendered harmless. The programs and schedules for the building of treatment systems, as approved by the Council of Ministers, must be observed. Past experience has indicated that good results are achieved wherever the programs are fulfilled. In 1977 the Zl Panega Cellulose Plant signed a contract with Schmid Firm in Denmark for the purchase of installations for removing the dust at the five technological

lines. The earth removal works for the foundations of the electric filters, refrigeration towers, and others, are already underway. The commissioned plate filter taps 2.5 tons of dust per hour. This means that the dust pollution in the area is being lowered. However, the other filters as well, as stipulated in the design, must be installed.

The Devnya Cellulose Plant uses Soviet filters which, properly used, are already yielding good results.

The filtering effect of dust tapping installations at many asphalt bases in the country has been improved. In over 60 of them new dust removal installations have been set up. Other asphalt bases were closed down or moved to suitable places away from settlement complexes. By the end of the year yet another 16 asphalt bases will be reconstructed and modernized.

At the Madara Trucks Combine in Shumen the installations for the purification of the air in the casting shop have been entirely replaced and are working adequately.

The effect of gas filtering equipment installed at the two technological lines for the production of sulfuric acid has been improved at the Chemical Fertilizers Plant in Devnya.

In order to resolve problems related to environmental protection, the Kremikovtsi Metallurgical Combine drafted a program and approved schedules for the building of treatment installations in the Seventh Five-Year Plan. The dust collectors to be installed at the four agglomeration lines and in the ferral alloy and blast furnace production facilities will tap 151,000 tons of dust per year.

Pollution has been considerably reduced in a number of industrial areas in the country thanks to the installation of air purification equipment. The ore treatment facility at the Kremikovtsi Metallurgical Combine is no longer releasing polluting gases into the atmosphere. Filtering equipment tapping 76 tons of dust per hour has been installed at 62 enterprises in Sofia which polluted the environment. The number of tapped harmful substances is increasing with every passing year: Eight hundred seventy-one thousand tons in 1976, and 1,241,000 tons in 1977; the 1978 estimates indicate the possibility for tapping 1,817,000 tons providing that the planned filters are installed.

Even though we are pleased with such accomplishments, they are not sufficient. In 1977 treatment installations which would have tapped 278,000 tons of dust per year were not completed. No funds have been scheduled for 1978 for the building of installations for the purification of the air trapping 58,000 tons of dust per year. The funds allocated for the first half of the year remained unused.

The pace at which this work has been proceeding so far creates serious concern that programs and schedules will not be met. The Ministry of Construction and Construction Materials, the Cement and Lime Production DSO [State Economic Trust], and the Assemblies DSO are underestimating environmental protection problems.

The deadlines for the reconstruction of the electric filters of the first and second clinker furnaces at the V. Pik Cement Plant were not met. The project is being underestimated and is about 10 months behind the planned deadlines. The Assemblies DSO has still not submitted a schedule for the full use of the funds allocated in the capital investments plan for this project. The building of the electric filters for the second stage dust tapping at the Devnya Cement Plant is being delayed as well. Unjustifiably, the planned figure was lowered and only four instead of eight filters will be built. Despite all obstacles, greater persistence must be displayed in the work, for the project has been scheduled for completion this year.

Not all problems related to imported and local equipment have been resolved. More effective measures must be adopted by the Ministry of Metallurgy and Mineral Resources and the Ministry of Construction and Construction Materials so that such a lagging may not increase any further. The Ministry of Machine Building is not supplying local and imported equipment and, together with the construction workers, is violating completion deadlines.

In some places enterprise managements are devoting efforts to rebuild filtering equipments using their own forces (as is the case with the rotational castings [rotkloni] at the Pig Iron Casting Plant in Ikhtiman); in other places the filters are not repaired promptly. Such have been the cases at the Miziya Cellulose and Paper Combine, the A. Stoyanov TETs in Sliven, the Ruse-Iztok TETs, and others.

A tragic situation has developed at the "I Komsomolska" TETs. Here the electric filters of some of the boilers are inoperative; as early as 1973 and 1974 electric filters were imported for the first six boilers and have remained uninstalled to this day. Neither the investors nor the assembly workers have taken measures to resolve these problems. According to the Council of Ministers schedule one of the filters was scheduled for completion before the end of 1977, and another two were to be installed in 1978. The way the Assemblies DSO has organized its work is such that no guarantees may be given that a single filter will be installed even by the end of this year.

The question of protecting the purity of the air has not been resolved by the carbide factories in Iliyantsi, Asenovgrad, and Devnya, since neither the Khimproekt designers nor the specialists of the Ministry of Chemical Industry and of the economic combines have considered this matter seriously.

The Committee for the Protection of the Environment is already imposing economic penalties on all such enterprises which have failed to take adequate measures for the protection of the environment.

The problem of the proper use of treatment installations is of exceptional importance in connection with the preparation for their commissioning and for reaching maximum results. This requires, on the one hand, well-trained production-operational personnel and, on the other, regular maintenance and repairs.

The production personnel must be appointed before the completion of the project. Available trained cadres are not being used. Most frequently the special dust removal groups are asked to perform other work. This has led to the wrong situation that for months on end many filtering stations and installations are unable to reach their planned capacity. It would be expedient for the cadres to become involved earlier with construction problems and familiarize themselves on the spot with the specific characteristics of the treatment process in order to be able to improve it and avoid a number of incomplete details before the installations have been commissioned.

The gas treatment installations must be repaired promptly. Recent experience shows that repairs are already being made faster. In a number of cases, however, the annual repair plans and schedules are violated. The gas treatment installations are part of the technological lines and should be repaired along with them. However, as a result of delayed repairs electric filters break down frequently, which leads to severe environmental pollution. The main thing is to work without blast releases of pollutants or pollution caused by equipment breakdown.

Spare filtering installations should be planned for, since a single day of stoppage of the electric filters at a cement plant would result in hundreds of tons of dust released into the air, covering everything around the plant. For example, working a single day without dust tapping equipment, the Zl. Panega Cement Plant released in the atmosphere 346 tons of dust; within a single day the V. Pik Cement Combine released 177 tons.

The section entitled "Air Protection" of the Seventh Five-Year Plan calls for the building of 51 new projects. Of these 46 will be completed before the end of the five-year plan. The funds to achieve this are available but have remained unused by the Ministry of Construction and Construction Materials, and the planned projects are not being completed. The 1978 plan called for the commissioning of filtering installations at the Kremikovtzi agglomeration production facilities, the V. Pik, Zl. Panega, and Devnya cement plants, and the I Komsomolska TETs, installations for tapping the dust of the smoke gases of the carbide shop of the Devnya Agricultural Combine, equipment for tapping and the utilization of sulfur dioxide at the G. Dimitrov Mining-Metallurgical Combine in Eliseyna, and others. This will enable us to tap 576,000 tons of harmful substances per year.

Despite the decision adopted by the BCP Central Committee Secretariat forbidding the reduction of funds and their utilization for purposes other than protection of the environment, and without the permission of the Council of Ministers Committee for the Protection of the Environment, both investors and planning workers lowered their annual assignments on the building of some filtering installations such as those at the ferral alloy production facility of Kremikovtsi Metallurgical Combine, the V. Pik State Cement Combine, the Zl. Panega Cement Combine, the I Komsomolska TETs, and others. All in all, for the past two years, this has represented a lagging of about 35 percent compared with the planned stipulations for the purification of the air included in the five-year plan.

Following the commissioning of the new air purification systems stipulated for the five-year plan, the additional quantities of harmful substances to be tapped annually should exceed 1,640,000 tons. Bearing in mind that the tapping of about 500,000 tons of dust per year was achieved in the Sixth Five-Year Plan with the help of the installed air filtering systems, the importance of such a success becomes apparent.

Ministries, okrug people's councils, trusts, and enterprises must take to heart all these problems and devote maximum efforts to resolve them successfully. Recently a number of problems were considered jointly with the Central Council of Bulgarian Trade Unions on the implementation of the schedules approved by the Council of Ministers on cleaning the air and the surroundings around the Kremikovtsi and G. Damyanov Metallurgical Combines. Together with the central committees of the trade unions of workers in the individual sectors and the local trade unions, we are adopting a number of measures whose implementation will enable us to achieve an upswing in the protection of the environment in industrial areas and enterprises.

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## EAST GERMANY

### STOPH RECEIVES UN ENVIRONMENT PROGRAM DIRECTOR

LD202323Y East Berlin ADN International Service in German 1810 GMT 20 Jul 78 LD

[Text] In Berlin on Thursday, GDR Premier Willi Stoph received Dr Mustafa K. at-Tulbah, executive director of the UN Environment Program, who is in the GDR for an official visit. During the discussion, the two men exchanged views on basic questions about the activities of the UN Environment Program (UNEP) and the deepening of cooperation between the GDR and UNEP. Stoph noted that cooperation with UNEP is an important element of the GDR's overall policy toward the United Nations. In its international activities in the field of environmental protection, the GDR is guided by the inseparable links which exist between the preservation and safeguarding of peace, the further realization of the principles of peaceful coexistence, effective measures for disarmament on the one hand and international cooperation in the sphere of environmental protection on the other. He underscored the GDR's great interest in convening an all-European conference on the environment, which would be in full accord with the Helsinki final act and with the pressing need of all states involved.

Executive Director Dr at-Tulbah voiced satisfaction with the constructive cooperation of the GDR in the UN Environment Program. He stressed the need for intensified international cooperation in the sphere of environmental protection and pointed to the efforts of UNEP to make a fitting contribution toward discussion and solution of the manifold problems of environmental protection, which are linked with the life of the nations.

Both sides expressed the conviction that cooperation between the GDR and the UN Environment Program will be further deepened in future. Taking part in the discussion, which occurred in an open-minded and friendly atmosphere, were Dr Hans Reichelt, deputy chairman of the Council of Ministers and minister for environmental protection and water management, and Lars Karlstrom, director of the Europe-UNEP liaison office.

CSO: 5000



## HUNGARY

### BRIEFS

NATIONAL ENVIRONMENTAL COUNCIL ESTABLISHED--Budapest, 11 Jul (MTI)--A national council for environment and nature protection was founded in parliament on 22 June to coordinate the relevant task. It is one of the eight state committees attached to the Hungarian Council of Ministers. Its president is academician Bruno F. Straub, its members are ministers concerned in matters of environment protection, heads of bodies with a nationwide sphere of authority, the president of the Budapest Municipal Council, persons nominated by them as proxies, as well as representatives of social organizations, scientists and specialists. The council is charged jointly with the national office for environment and nature protection to elaborate till the end of this year an environment protection program for the Sixth Five-Year Plan 1981-1985. [Excerpt] [Budapest MTI in English 1032 GMT 11 Jul 78 LD]

CSO: 5000

## CHILE

### BRIEFS

EARTHQUAKE CASUALTY FIGURES REVISED--The results of the earthquake in the third region include 6 seriously injured, 7 lightly injured, 373 persons--including 132 children--homeless, 2,732 houses with serious damage and 108 uninhabitable houses. [In a recorded interview later in the newscast, the third region intendant says that a miner who was previously thought dead is among those seriously injured] [Excerpt] [Santiago Chile Domestic Service in Spanish 1730 GMT 4 Aug 78 PY].

CSO: 5000

## URUGUAY

### GOVERNMENT HYDROTHERMAL PROJECT DETAILS DISCLOSED

Montevideo EL DIA in Spanish 25 Jun 78 p 9

[Text] Details concerning the establishment of an "Experimental Station for Studying the Application of Hydrothermal Resources" have officially been released.

This involves a decree signed during a government team's visit to Salto and providing for the study of deep thermal water resources in the northeastern part of the country and whose existence has been established in Artigas, Salto and Paysandu.

According to what has been established, Uruguay has an important source of wealth in the deep aquifer--with a flow volume of up to 800,000 liters hourly and a temperature of 40 degrees Centigrade--from which the water emerges after crossing basaltic layers hundreds of meters thick, from an average depth of 1,200 meters. This water is drinkable, with a low salt content, making it suitable for irrigation and other purposes, such as production of small amounts of electrical energy, therapeutic uses, a tourist attraction, etc.

#### Station Objectives

In accordance with this decree--dated 17 May 1978--the objectives of the "Experimental Station for Studying the Application of Hydrothermal Resources" are the following: a) Feasibility analysis with regard to installing irrigation equipment using underground thermal water from the deep aquifer; b) Investigation of the effects of thermal water irrigation on indigenous flora; c) Examination of the possibility of planting nontraditional domestic crops which could be adapted on the basis of thermal irrigation; d) Study and examination of the changes which would occur in living soil organisms with prolonged use of thermal water; e) Study and investigation of the changes which could occur during the effect of fertilizers acting on soil irrigated with thermal water; f) Study and investigation of the changes which would occur in the concentration of soil salts with prolonged use of thermal water; g) Study of the possible effect of thermal water

irrigation on the effects of frost; h) Study of the changes in the growth cycle of various types of plants when irrigated with thermal water; i) Study of the changes which could occur in the nutritive properties of natural pastures, artificial meadows and fields irrigated with thermal water.

#### Multiple Participation

Putting the Experimental Station into operation involves various public agencies. The Ministry of Education and Culture is in charge of the management, administration and provision of technical, administrative and service personnel, and also has to coordinate with the Northeast Aquifers Study Unit on the implementation of projects. In turn, the Ministry of Industry and Energy will provide the most cooperation to the aforementioned ministry for carrying out the works and will hire an agricultural engineer and rural technician for such purposes. As for the Municipal Intendencies of Artigas, Salto and Paysandu, they will each have to provide the Ministry of Education and Culture with usufruct of a minimum area of 10 hectares, with access to thermal and surface waters, and will also have to supply the construction equipment needed.

Finally, the Ministry of Agriculture and Fishing will furnish technical information and construction equipment and the Ministry of National Defense will assure the coordination and support of all agencies involved.

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CSO: 5000

URUGUAY

COMMITTEE FORMED TO SURVEY, REPORT ON POTABLE WATER STATE

Montevideo LA MANANA in Spanish 27 Jun 78 p 6

/Text/ The members of the Sewage Treatment Commission assumed their posts last evening. The ceremony was held in the office of Transportation and Public Works Minister Eduardo Sampson who later spoke with the members of the commission created by the President to study the problem.

Following the ceremony, the commission members, Danilo Restano who will head the commission, Guido Simetto, Hugo Lluberas, Julio Echart and Dr Leon Perez Moreira, met to establish a work program.

"Our first activity was to plan the future tasks for dealing with the complex problem of treating sewage to make it potable," Simetto told EL MANANA.

"The commission will meet every Friday and one of the first steps it will take is to collect all research material available on the subject and contact all individuals who are presently studying the problem from different angles," he said.

In addition, background information or conclusions reached by other commissions seeking a solution to the same problem will also be collected. A study of the present situation will then be made and a report prepared containing the commission's conclusions and recommendations.

The Sewage Treatment Commission will not only receive information from national groups involved in sanitation works but also from throughout the world where measures have been applied successfully.

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URUGUAY

DRINKING WATER SYSTEM EXPANDED IN SAN JOSE AREA

Montevideo EL DIA in Spanish 24 Jun 78 p 12

[Article by Carlos Lacava Berardi]

[Excerpt] San Jose--Dr Nery T. Arriaga Square was the site of the ceremony in which the OSE [State Board of Sanitation] proceeded to open the expansion of the Group 2 systems of the "30 Localities" Plan financed by the Inter-American Development Bank [IDB].

The OSE chairman, Eng Nicolas Goloubintseff, addressed those present: "The administration of the State Board of Sanitation is today opening the expansion of the Group 2 systems of the '30 Localities' Plan financed by the IDB. This plan emerged from the studies made between 1973 and 1974 because of the drinking water supply needs of various locations in the interior of the country. A full plan of operations had to be developed that would provide for the supply of a higher percentage of people and also avoid a supply shortage. The basic objective of this plan was to maintain and possibly raise the high domestic sanitary level reached in the area of drinking water.

Almost 61,000 Meters of Expansion

"That study made it possible to select priority works and on 4 September 1975 the agreement between our republic and the IDB was concluded for a total amount of \$10 million to implement the program for expanding and improving the drinking water system in 30 localities in the interior of the country, which included the 18 departmental capitals. With the work completed and with the support of our entire administration, today we proudly turn over for public use all expanded water systems representing Group No. 2 and including the localities of Canelones with 5,775 meters, Pando with 6,000 meters, La Paz with 8,400 meters, Santa Lucia with 17,000 meters, Las Piedras with 15,000 meters and San Jose with 8,500 meters, totaling almost 61,000 meters at a cost of 4.756 million pesos. The most important feature is that about 20,000 residents will benefit from these expansions."

## Observance of 195 Years

The OSE chairman explained that the aforementioned ceremony had been planned in San Jose because the administration considered it necessary to observe the ceremonies commemorating the 195th anniversary of the founding of San Jose de Mayo, during this month of June 1978, with the provision of these very important works.

He recalled that the installations for household supply of drinking water and sewerage removal and purification in San Jose were built in January 1929. It was the 12th interior location that came to have these services and the fourth with a sewerage system.

On 22 June 1929, San Jose had 103 water lines and 73 sewer lines, 24,000 meters of water system and 21,000 meters of sewerage system. The plant distributed 230,000 liters of water daily.

Today, according to the OSE chairman, 49 years later San Jose has 64,000 water lines and 3,300 sewer lines, with 89,000 meters of water system and 34,000 meters of sewerage system.

On 22 June 1929, San Jose had 103 water lines and 73 sewer lines, 24,000 meters of water system and 21,000 meters of sewerage system. The plant distributed 230,000 liters of water daily.

Today, according to the OSE chairman, 49 years later San Jose has 64,000 water lines and 3,300 sewer lines, with 89,000 meters of water system and 34,000 meters of sewerage system.

The local plant supplies 3,670 cubic meters of drinking water daily and has modern administrative offices.

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CSO: 5000

## URUGUAY

### ROCHA ANALYZES PROBLEMS OF DRAINING MARSHLANDS

Montevideo EL DIA in Spanish 30 Jun 78 p 10

[Text] The Rocha municipal government has made the initial contacts in connection with drainage of the marshlands in the department. According to Mayor Col Ignacio Bonifacio, contractors have been contacted about studying problems related to the ambitious project.

The mayor added that the future work, which encompasses a wide area, will allow better use to be made of the land in the targeted area.

Colonel Bonifacio also told EL DIA that an agreement has been signed which will permit the creation of an "international camping ground" at the Andresito (de la Paloma) Park. The park has an area reserved for camping and it will be restructured and improved.

At the same time he announced that a new plan is underway to improve the road system in the department. A portion of the project is being conducted "independently while another portion is being conducted jointly with the Transportation and Public Works Ministry." "These projects represent a huge investment for a municipal government whose resources are not handled on a large scale."

### Promoting Tourism

The mayor of Rocha stressed that he was optimistic about the tourist trade during the coming season. "A large-scale national and international campaign is being conducted to attract travelers. We hope that the number of tourists will increase this summer."

He said that he expected to see Brazilian tourists in July. "But normally tourism during the winter season is very light in Rocha." The tourist trade is limited to an occasional weekend visitor.

He added that existing plans for the tourist trade will be expanded and "we intend to extend the classical, the traditional season by including various activities."



He cited as an example the establishment of amusements at La Coronilla and the organization of "the week" in La Paloma in September. He emphasized that efforts are being made to improve the infrastructure and services.

Colonel Bonifacio also announced that the chorus will tour the Argentine provinces to promote participation and attendance at the International Chorus Festival to be held in La Paloma (December).

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CSO: 5000

URUGUAY

SALTO GRANDE DEFORESTATION CONTINUES, ARGENTINE FIRM AIDS

Montevideo EL DIA in Spanish 27 Jun 78 p 12

[Text] Salto (By Wilfredo Paiva)--Although much work has been done to clear the area composed of the islands and coastal areas which will be affected by the creation of the Salto Grande lake, there is still a great deal to be done.

The area involved consists of woodland extending from the islands to those bordering the coast of Belen. And the area covers nearly 10 hectares.

At present the Argentine company UANINI, with its employees, its axes and its machinery, is clearing the banks of the Itapebi stream. Gone forever, as EL DIA documented at the beginning of the project, are the lapacho, the viraro, the guayabo and the ugajay.

Here and there columns of smoke rise from the bonfires that are being fueled by trees which at one time dotted the countryside, sheltered birds and served as a roof for many hearths and which today are no longer useful.

All life is fleeing from the area.

A few weeks ago, for example, the so-called Isla de Abajo together with the Redonda, the De los Lobos, the Del Medio, the De Arriba Islands and the Verdun Keys formed a dense green stage of beautiful vegetation that appeared to emerge from the bottom of the water and today it is truly a desolate sight.

Flora and fauna were born here, grew here and flourished for thousands of years on its fertile soil.

Man also left his unmistakable print on the landscape. Published photographs, on the other hand, show the former theater of life converted into a desolate panorama.

On 1 March 1979, the date on which construction of the lake will begin, the land will disappear forever under the waters which once bathed its shores. Salto Grande has a great deal to offer. But that which it is displacing is not insignificant...

## URUGUAY

### NATIONAL FORESTS MAINLY SERVE INTERNAL NEEDS

Montevideo EL PAIS in Spanish 31 Jun 78 Supplement p 2

[Text] To date livestock raising has been the principal sector using our most important renewable natural resource--the land. Over 90 percent of the land is natural grasslands and less than 4 percent of the remainder is covered by natural forests along the banks of rivers and streams and in the mountains. It is here that the water supplies permit forestation with tolerant species from warmer climates and, as a result, of different sizes and shapes than that of their natural habitat.

Once the trees are established, the lumber does not have commercial value but the trees do provide protection for the soil, regulate the surface water and they provide protection for a large group of native fauna. To some degree, the farmers use the trees as protection for their livestock or they use the lumber for rural building projects or simply as firewood. This service of shelter and shade for the livestock is complemented in the meadows with plantings of exotic trees, primarily, eucalyptus, cypress, pines, willows and cottonwoods.

Forestation for commercial purposes is very limited so that most lumber products for domestic consumption are imported. At the same time and this is a recent development, Uruguay now has a forestry law and a production policy. Both promote forestation with exotic species and the goal is to plant 200,000 new hectares over a 10 year period.

#### Species to Be Used in Our Country

The urgent need to correctly apply the required policies to achieve sound forestry development calls for the wide distribution of those species which have a better chance of survival in the country, which are healthy specimens and which will grow in the shortest possible time.

Forestry development, including a sensible increase in the areas planted with exotic species to create forests for production, and the creation of an industry to meet the internal demand and even the external demand for forestry products is being done at a fast pace in the nations of the southern hemisphere, including, and in particular, Chile, Brazil and Argentina.

Uruguay should take similar steps because the same reasons which led those nations to consider making investments, establishing policies, passing legislation and promoting internal forestry production, as a result of the world shortage, are present in our country and they limit basic activities such as housing construction and the dissemination of culture and printed information.

It has been reported that world-wide consumption of forestry products will continue to increase and that in the case of paper and boards it will be necessary to produce  $2\frac{1}{2}$  to 3 times as much as the present output to meet the demande projected for 1985. Latin America imports \$350 million annually of these products, primarily pulp and paper. It is also estimated that housing construction will have to double over the next 20 years.

#### Making Self-sufficiency a Possibility

Uruguay consumes over \$25 million per year worth of these products and it has limited forestry resources. But over the last 10 years measures have been taken to insure self-sufficiency in these products: passage of Law 13,723 (Forestry Law), tax exemption measures, plans for the forestation of 50,000 hectares, IADB financing and so forth. At the same time, research has been done and the results point to the possibilities for planting exotic species to create industrial forests whose production will be highly competitive with traditional sources of production.

#### A Basic Point: Training Technicians

The training of technicians and personnel in sufficient numbers to permit forestry development to get underway is a basic step. Graduates from the School of Agronomy must share much of the responsibility for the implementation of these policies, for making them public and for training the producer.

Knowledge of the appropriate species is basic because it is not simply a matter of providing shelter or other types of services but also of producing lumber which is a basic service that will insure economic returns. Therefore, the forester must be absolutely certain that the exotic species he recommends are suited to a particular location and soil type and he must know how to replace a meadow with a forest, eliminating competition with grasses, preventing problems caused by freezing weather and combating natural enemies so that an adequate level of production, both in quality and quantity, can be achieved. Influencing the producer and his willingness to learn about proper exploitation will be achieved in the same way that it was accomplished in the fields of livestock raising and agriculture over the years.

#### Forestry Research

The School of Agronomy has been doing forestry research by planting different species in experimental plots to determine which species can

better adapt to local conditions. Factors taken into consideration include distance between seedlings, health and so forth at the following experimental fields: Banados de Medina (Cerro Largo Department), in Tacuarembó on fields belonging to the city government, at the Caja Bancaria in Paysandu, in El Espinillar in Salto and in Pan de Azúcar in Maldonado. The work is being done jointly with other official agencies and forestry training is being provided as a specialized field taught by the school.

This field of study, approved in 1958 and begun in 1963, has led to the training of agronomists who are knowledgeable about the present needs of the producer and can implement the techniques used in the forestry sector. The branches of forestry, dendrology, timber technology and parks and gardens compose a group of specialized study that is supplemented in the 4th year of study with such courses as soils, plant health and topography. At this time, officials are considering expanding this field of study to 5 years and extending the period of time spent training in the field to 4 months.

In addition, steps have been taken to provide technical assistance. Prominent among these is the Forestry Seed Bank which is a organization designed to provide self-sufficiency in seeds. The Bank collected over 600 kilograms of pine seeds from the southern United States which were distributed to producers who are benefiting from Law 13,723 (Forestry Law).

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## URUGUAY

### BRIEFS

PASO SEVERINO DAM--The President sent a message and a bill to the Council of State for its approval of a loan agreement between Uruguay and the IDB. It was submitted on 20 April 1978 and was for a sum of \$26 million that was to be used to finance construction of the Paso Severino Dam and other expansion and improvement works related to Montevideo's Potable Water System. Article 2 of the bill authorizes the President to provide up to \$18 million or its equivalent in Uruguayan currency as the nation's share in financing the above mentioned public works project. /Text/ /Montevideo  
EL DIA in Spanish 30 Jun 78 p 4/ 8599

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# DETAILS ON TREE PLANTING CAMPAIGN

## Reforestation in Addis Alam

Addis Ababa THE ETHIOPIAN HERALD in English 25 Jul 78 p 6

[Text]

**In an effort to restore the increasingly devastating forestry resources in the country, about 350 workers and employees of the Forestry and Wildlife Department Authority (FaWDA), launched Sunday a day-long afforestation campaign in a vast tract of land in the vicinity of Addis Alam, 55 kms from here.**

Also taking part in the campaign were struggle to bring about a socialist society Mr. Eskil Lunberg, charge d'Affaires of where peace, democracy and prosperity the Swedish embassy here and Ato prevail.

Teshome Matias, acting general manager Later, Ato Teshome Matias, acting of FaWDA who addressed the gathering general manager of the FaWDA made a ing on the importance of launching a brief speech in which he stressed the massive afforestation campaign. progressively denuding forest potentials in the present day Ethiopia and signi-

### Vital Element

In his brief remark Mr. Eskil expressed his appreciation for the Ethiopian popular forces for setting off the nationwide afforestation campaign which is of far-reaching importance for the well-being of the national economy. He said that mobilization of this kind is forming a vital element of socialist Ethiopia's development strategy. The charge d'Affaires also noted the unreserved efforts of Swedish experts working side by side with the Ethiopian masses in the field of forestry. In his final remarks, Mr. Eskil expressed his confidence on the success of the Ethiopian masses in their

fighted the indespenability of massive campaign with the view to saving Ethiopia's forestry from deplorable conditions. He said that however much as the on-going revolutionary struggle is against the reactionary forces whose frantic effort is to undermine the unity and territorial integrity of the Motherland and reverse the Revolution, it is also imperative to wage an all out struggle against deforestation. According to a spokesman of FaWDA about 40,000 seedlings were planted making the total amount so far planted throughout the country 16 million.

## Seedlings Planted At Debre Zeit

Addis Ababa THE ETHIOPIAN HERALD in English 26 Jul 78 p 6

[Text]

**NAZARETH** — Some 150,000 seedlings have been planted recently on two mountains near Debre Zeit town, the major Abebe Tsighie revealed.

The afforestation campaign is a result of agreements reached on June 10 and 11 at a general meeting convened to discuss matters pertaining to development. Members of the Air Force, Air Borne, the Anti-Aircraft Unit, The Adaa District Police, The Adaa District Peasants' Association, the Women's Association, the General Services Association and residents of Debre Zeit and patriotic individuals had taken part in general meeting.

## Directive on Tree Protection

Addis Ababa THE ETHIOPIAN HERALD in English 23 Jul 78 p 6

[Text]

The Addis Ababa Overall Urban Dwellers' Association Friday issued a 15-point directive governing the protection and proper utilization of demarcated and undemarcated tree and forest stands as well as grass enclosures within the municipal confines of the capital.

Once covered with forests, it is pointed out, the site of the capital and its environs have been progressively denuded to a point where shortage of wood and wood products is acute and the natural beauty of Addis Ababa very adversely

sely affected.

The newly issued directive, to be effective beginning July 26, 1978, declares that tree and forest stands as well as grass enclosures in 38 *kebeles* within 11 Higher Urban Dwellers' Associations are "demarcated" as of that date. Special protection is to be given to trees over 15 years old and to all rare species. The directive emphasizes moreover that no resident can cut down trees without the prior approval of his or her respective *kebele*.



## Reforestation Campaign Near Sebetta

Addis Ababa THE ETHIOPIAN HERALD in English 21 Jul 78 p 3

[Text]

**Employees of the Ministry of Education have planned to launch afforestation campaign today in the vicinity of Sebetta about 30 kms from here, a spokesman of the ministry told the Ethiopian Herald yesterday.**

The spokesman further stated that the number of participants is limited to about 160 due to shortage of transportation. Those who do not participate in today's campaign he noted will be engaged in the next campaign.

In a related development, members of the 289 urban dwellers associations, city council and office-bearers of the 25 Higher *kebeles* in the city launched Tuesday afternoon afforestation campaign in and around Tatek Military Training camp, it was learned.

### **Kebeles' Role Praised**

Ato Kassa Kebede administrator of the Tatek Military Training camp in a speech he made on the occasion praised the role played by *kebele* associations in providing provisions for people's militia, and in supplying the necessary materials to facilitate construction of the camp at that time, when the camp was not able to do things by its own. He also said,

"I express by heartfelt gratitude on my own behalf and on behalf of the people undergoing training for coming to this historical place and plant commemorative seedlings".

Comrade Captain Moges Zede, head of the political affairs of the people's militia spoke on how the defunct feudo-bourgeois regime destroyed forests for private uses which created scarcity of trees and added that a lot is expected from the broad masses to participate in the afforestation campaign to alleviate shortage of trees in the country.

Colonel Afework W/Michael commander of the Tatek Military Training camp briefed participants on the importance of afforestation campaign and asked Comrade Dr. Alemu Abebe Mayor and chairman of the Addis Ababa over all urban dwellers city council to plant the first seedling which was soon followed by members of the standing committee, executives of Higher *kebeles* and *kebele's* association.

## Positive Response to Reforestation

Addis Ababa THE ETHIOPIAN HERALD in English 21 Jul 78 p 3

[Text]

**The general manager of the Forestry and Wildlife Conservation and Development Authority, Ato Teshome Mathias, yesterday expressed "full confidence" that the afforestation campaign set afoot early this month is gathering tempo and momentum in view of the fact that the initiative continues to arouse "spontaneous response" in both urban and rural communities.**

Public response to the afforestation campaign has been more than expected, he pointed out, and no less than 16 million of the 25 million seedlings prepared by the authority have been already planted. Employees of the Ministry of Information and National Guidance, who planted no less than 40,000 seedlings were credited with having played a significant role in awakening the masses to the alarming rate of deforestation in the country. Only four per cent of the Ethiopian land surface is now covered with trees compared to 40 per cent only a few generations ago, he noted.

Ato Teshome, who has been in the forestry field since his secondary school days and pursued higher education on the subject both here and abroad, told an Ethiopian News Agency reporter yesterday afternoon that the authority feels all the more encouraged by what he described as the "unstinted support" of the Provisional Military Government.

### **Reckless Tree Cutting**

Much of the damage to the enormous natural resource which forests represent in terms of potential source of foreign exchange as well as the environmental consequences have been caused by reckless tree cutting during the last 50 years, population pressure, and more particularly the discredited feudo-bourgeois regime's deplorable tradition of allotting vast tracts of land to members of the royal family, the aristocracy, the military oligarchy and the church.

The general manager of the Forestry and Wildlife Conservation and Development Authority pointed out that due to rampant and uncontrolled deforestation, the wildlife reserves of the country have been depleted, livestock decimated and, worse still, billions of tons of fertile soil washed away to foreign lands by the Nile and other major rivers. Abrupt changes in climatic conditions are also

elemental in causing drought and famine in regions like Wollo, Tigray, Eritrea, Hararghe and Bale, he stated.

Ato Teshome pointed out that one of the major triumphs of the revolution lies in the nationalization of rural land — which automatically meant the return to public ownership of forest lands up and down the country. This paved the way for strict and more properly defined rules and regulations regarding forest and wildlife protection, he noted. The authority nonetheless feels that a "forest policy and proclamation" has yet to be declared to achieve desired aims and objectives.

### **Future Plans**

Ato Teshome said that there are at present more than 100 tree nurseries in Ethiopia and that plans are being hammered out to establish more — with priority given to heavily denuded regions in Wollo and elsewhere. Proper land use planning also figures high on the authority's list of priorities. The authority is responsible for raising 25 million seedlings, the protection of 814 hectares and the demarcation of 912 square kms in 1969 E.C. Plans are afoot to synchronize forest development plans with agricultural development plans, recover rate of forest industries, mobilize human resources to mount a "massive" nationwide afforestation scheme, and declare new forest reservations across the country. The authority feels that the declaration of a forestry proclamation, defining forest land and the responsibilities of peasants' associations and the "national forestry organization," are indispensable.

The authority is also inclined to believe that the "bottleneck" in the past has been not so much funds but trained manpower and "a legal platform to work from." Ato Teshome is confident that, thanks to unreserved sympathy and support on the part of the government as well as of the broad masses, problems currently facing the authority will be overcome in due course.

## ETHIOPIA

### BRIEFS

FLOOD DAMAGE--Debre Berhan--Some 27 residential houses, 25 domestic animals and a number of farming tractors were washed away by floods on Wednesday in Robit town of Yifat-Timuga province of Shoa region, the district administration office disclosed. According to reports the property destroyed would amount to 225,000 Birr. In a similar development, a total of 350 domestic animals were washed away, and bean plantations on four acres of land were destroyed by floods in Yaya Gulelea district of Selale province in Shoa region last week. [Text] [Addis Ababa THE ETHIOPIAN HERALD in English 29 Jul 78 p 6]

CSO: 5000

# ENVIRONMENTAL PROTECTION IN THE UKRAINE

Kiev PRAVDA UKRAINY in Russian 4 Jun 78 p 4

[Article by Ye. Litvinov, first deputy chairman of the State Committee of the Ukrainian SSR Council of Ministers for the Protection of Nature: "For Ourselves and our Posterity"]

[Text] Each year man extracts billions of tons of various kinds of ore, fuel and construction materials from the depths of the earth; he spreads 90 million tons of mineral fertilizers and more than 2 million tons of toxic chemicals on the fields; and he discharges into the atmosphere more than 200 million tons of carbon monoxide, about 146 million tons of sulphur dioxide, more than 2 million tons of ash and about 60 million tons of sulphur anhydride from power installations. During a year, industrial enterprises discharge more than 30 billion cubic meters of unpurified water, 250 million tons of dust and 70 million tons of unpurified toxic gases.

Today it is becoming more and more obvious that it is necessary to fight against the pollution of nature and the squandering of its riches and resources. The U.N. conference held 6 years ago in Stockholm adopted a declaration which contains an appeal to accept the "solemn duty of protecting and improving the environment for present and future generations," and it declared 5 June to be the Worldwide Day of Protection of the Environment.

States with different social systems deal differently with ecological problems. In their pursuit of profit, capitalists utilize natural riches rapaciously: deposits of minerals, the soil, water resources and forests. V. I. Lenin repeatedly emphasized the destructive nature of the influence of bourgeois society on the natural environment and pointed out that capitalism is creating a competition which is accompanied by plundering of the natural resources.

In the countries of socialism, protection of nature is an important constituent part of the state policy. At its basis lies the embodiment of Lenin's ideas concerning efficient utilization of natural wealth and a solicitous attitude toward them and the native land. In the Soviet Union, for example,

under the Tenth Five-Year Plan 11 billion rubles in centralized capital investments alone were allotted for these purposes.

The union republics have adopted laws concerning the protection of nature. The utilization of water and land resources as well as the riches of the depths of the earth is regulated by the corresponding legislative acts. Rare kinds of animals and plants have been taken under protection. A network of game preserves and national parks has been created. They are used for scientific purposes.

State ownership of the main natural resources in our country offers great possibilities of efficient and planned utilization of natural riches.

Under the Tenth Five-Year Plan the Ukrainian SSR allotted 4.3 billion rubles for the protection of nature. This makes it possible to carry out an entire complex of jobs for the protection of nature.

Each year soil protection cultivation is done on an area of 9-11 million hectares. The front of the work for recultivation of the land is expanding. During 2 years of the five-year plan, this work was done on 20,000 hectares. Anti-erosion measures have been carried out on 70,000 and 56 million rubles have been spent on hydraulic engineering installations to protect against erosion.

The republic is now effectively purifying about 85 percent of the polluted wastes. Last year alone the daily capacities of purification installations increased by 790,000 cubic meters. The quantity of water in recycled water supply systems has been increased to 40 billion cubic meters, which made it possible to save up to 65 percent of the fresh water previously used in industry.

A considerable amount of work is also being done to protect the air basin from pollution with industrial discharges. During the last five-year plan, more than 1,500 dust and gas purification installations were put into operation at enterprises and more than 250 industrial enterprises and shops that pollute the air to an especially great degree were moved beyond city limits. Resources are being enriched by live nature. During the years of the last five-year plan, 560,000 hectares were planted in forests and 202,000 hectares of ravines, gullies, sand and other land unsuitable for agricultural utilization was improved. The volume of work for the protection of fauna and the propagation of wild animals is increasing.

Nature, with its unique beauty and wealth, is nationwide property. Therefore its protection is considered to be a nationwide matter. The republic has extensively developed a movement of the community for the protection of nature. The Ukrainian Society for the Protection of Nature plays a large role in this movement. Its ranks include about 12 million people. Members of the society contribute to practical implementation of measures for the protection of nature.

The struggle for the protection of the environment is an indispensable part of the Program of Peace, which is being implemented by the Communist Party and the Soviet State. It is organically connected to the struggle of the forces of progress for universal peace and international security. From the tribune of the 25th CPSU Congress, Comrade L. I. Brezhnev included protection of the environment in the most important and crucial global problems which, in the future, "will exert an increasingly marked influence on the life of each nation and on the entire system of international relations."

The Soviet Union actively participates in bilateral cooperation with interested countries and in the work of international governmental and nongovernmental organizations that have set the protection of the environment as their goal. One of the main directions is cooperation with socialist countries within the framework of the CEMA. It is developing on the basis of a general program adopted by the CEMA Ispolkom in 1974. The USSR is developing bilateral cooperation in the area of protection of the environment with the United States, England, France, Japan, Sweden, Finland and several countries. They exchange experience and information and conduct joint scientific research.

In 1977 in Geneva, representatives of 33 states signed an international convention on the prohibition of military or any other kind of hostile utilization of means of affecting the natural environment. This was adopted on the initiative of the Soviet Union. The convention has now been signed by 44 countries and on 16 May of this year, the Presidium of the USSR Supreme Soviet ratified it. On 25 May the Presidium of the Ukrainian SSR Supreme Soviet also ratified this convention.

Our country is striving to do everything necessary to provide for the protection, renewal and improvement of favorable natural conditions that are necessary for the life of people on the planet and the development of material production and culture. The policy of the Soviet government in the area of protection of the environment is based on the idea that not only those living now, but also subsequent generations of people must have a chance to take advantage of all the blessings provided by nature.

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CSO: 5000

EFFECTS OF ENVIRONMENTAL POLLUTION ON GENETICS

Baku BAKINSKIY RABOCHIY in Russian 4 Jun 78 p 3

[Article: "Concern for the Health of Future Generations"]

[Text] The ways and means of preventing undesirable effects of a polluted biosphere on man's genetic system were considered at a Soviet-American symposium held in Baku. Its participants exchanged information about the latest research in this area and became familiar with the work of a number of laboratories of the Institute of Botany of the Azerbaydzhan SSR Academy of Sciences.

In response to a request from a correspondent of the Azerbaydzhan Information Agency, N. Barskiy, the results of the symposium and the main directions for the activity of scientists in protecting the health of future generations were discussed by the director of the Institute of General Genetics of the USSR Academy of Sciences, Lenin Prize winner, Academician N. P. Dubinin:

"One of the most important concerns of geneticists throughout the world and the main subject for consideration at the symposium," said the scientists, "is the problem, as it were, of the quality of the population of our planet. It has been proved that the negative effects of the environment on heredity are increasing more and more. In the United States, for example, according to statistics, more than 10 percent of the children are born with various defects. And it is not surprising that now in many countries and regions -- India, Japan, Europe and America -- societies are being created, whose goal is to protect posterity from the harmful effects of a polluted biosphere.

"Our country is creating a unified genetic service which is called upon to coordinate the efforts of biologists, medical personnel, anthropologists and sociologists. Utilizing the advantages of socialism, we are setting this problem as a nationwide concern in the struggle for the health of future generations. A special section under the State Committee for Science and Technology is developing the scientific and methodological bases of this service.

"Cooperation between Soviet and American scientists is fruitful within the framework of the 'Man and Biosphere Program' which is now in effect. At the symposium in Baku -- and this is already our fifth meeting -- there was an interesting exchange of opinions and creative discussions were held. While previously this cooperation, which was equally useful to all mankind, was manifested only in the exchange of information, now for the first time we have reached agreement about the basis of joint work. If one may turn to 'cosmic' comparisons, there has been a kind of meeting of the genetic 'Soyuz' and 'Apollo.'

"A new method of investigating the most complicated processes that take place in the organism has been suggested at our institute by Prof. Yu. Altukhov. I especially wish to discuss the work which largely affected the symposium in Baku, where crucial research on this problem is being conducted in the Institute of Botany of the republic Academy of Sciences. Even at our meeting last year in the United States, general interest was aroused by a statement of a scientist from Azerbaydzhan, U. Alekperov, the deputy director of the Institute of Botany, who developed an original method of protecting the genetic system from the negative effects of the environment. For the first time in the world, the possibility was suggested of practically utilizing antimutagenic compounds and mobilizing cells against dangerous effects. The results of the research give great hope -- the level of harmful mutations is reduced by 40-50 percent. The Azerbaydzhan biologists has again been confirmed as the coordinator from the USSR on this problem in the joint Soviet-American program.

"The question of the health of our posterity is a most crucial problem of genetics and the symposium in Baku became an important landmark on the path to its solution."

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USSR

## ORGANIZATIONS MONITOR POLLUTION OF CASPIAN

Baku BAKINSKIY RABOCHIY in Russian 4 Jun 78 p 2

[Article: "For Purity of the Environment"]

[Text] A conference held on 2 June in the Azerbaydzhan SSR Council of Ministers was devoted to questions of the protection of nature and efficient utilization of natural resources, the course of the fulfillment of party and government directives in this area and, in particular, the decree of the USSR Council of Ministers, "On Additional Measures for Protecting the Caspian Sea from Pollution."

The conference was opened with an introductory statement by the chairman of the republic Council of Ministers, A. I. Ibragimov.

Information about work that has been done and measures for preventing pollution of the environment, particularly the Caspian Sea, was presented in speeches by the chief of the administration of the republic hydrometeorological service, A. I. Aliyev; the chief of the Azerbaydzhan Kaspvodnazor Administration, V. L. Pisachenko; and general directors of the following associations: Kaspmorneft' -- A. B. Suleymanov and Azneft' -- B. A. Gadzhiyev. Information was also given by the president of the republic academy of sciences, G. B. Abdullayev; the first deputy minister of the petroleum processing and petrochemical industry of the Azerbaydzhan SSR, K. M. Kasumov; the first deputy chairman of the Baku city ispolkom, V. S. Mayorov; the deputy chairman of the Sumgait city ispolkom, V. K. Bayramov; the chairman of the republic Society for the Protection of Nature, academician of the Azerbaydzhan SSR Academy of Sciences, G. A. Aliyev; and the republic deputy minister of public health, G. Z. Aliyev.

Also speaking at the conference was the deputy chairman of the Commission for the Protection of Nature of the Council of Nationalities of the USSR Supreme Soviet, the director of the Institute of Applied Geophysics of the Main Administration of the Hydrometeorological Service under the USSR Council of Ministers, academician Ye. K. Fedorov. He discussed important tasks

in the work for the protection of nature. He emphasized the need for strict control over the condition of the environment and sources of its pollution as well as the need for active development and introduction into production of technological processes that provide for reducing wastes and maximally utilizing them, and also systems for utilizing recycled water.

Also participating in the work of the conference was a member of the Bureau of the Central Committee of the Communist Party of Azerbaydzhan, the first deputy chairman of the Azerbaydzhan SSR Council of Ministers, I. A. Ibragimov.

11772

CSO: 5000

PROTECTION OF LENINGRAD'S AIR BASIN DISCUSSED

Leningrad LENINGRADSKAYA PRAVDA in Russian 6 Jun 78 p 2

[Article by N. Andreyeva, engineer: "Clear Skies"]

[Text] The city and the air ... How does one find the optimal variants of their "cooperation"? Dozens of industrial enterprises discharge gas and dust into the atmosphere. The streets are ensnared by a dense network of transportation and it is known that one automobile running for 1,000 kilometers "eats up" as much oxygen as one person needs in a year.

"The thick and sticky fog spread throughout the streets, cutting off squares and public gardens from the sun. Time and again the alarming darkness was cut through by the wail of ambulance sirens. The pale driver of the truck opened the door of the vehicle with difficulty and ran to an oxygen dispenser hanging on the wall. He put several coins in it and placed the mask on his face."

This is not an excerpt from a science fiction novel, but an episode from life in Tokyo. It is also difficult to breathe in Paris, Los Angeles, New York and Chicago. Voices saying that the ecological crisis is not resolved are heard ever more clearly in these places.

We do not have such phenomena. Moreover, concern for the purity of the environment has brought Leningrad, according to UNESCO figures, into the group of the ecologically best large cities in the world.

Just in recent years, we have changed the profiles of dozens of harmful industries. Many have been relocated in the nonresidential zones. Those that especially pollute the environment have been eliminated. Old installations for purifying wastes at enterprises are being reconstructed and new ones are being installed. More than 1,500 small boilers have been changed over to gas and consolidated.

Each day the sanitary and epidemiological station registers the content of dust and gases at various points of the city, taking into account the

permissible concentration of 130 chemical substances. Incidentally, our country is the only one in the world that has established norms for controlling such a significant number of substances. In the next few years an automated system will go into operation for gathering and processing data concerning the condition of the environment in various regions of Leningrad. This will make it possible to have the most up-to-date and precise information and, naturally, to take the corresponding measures.

The State Inspection Team for Control of the Operation of Gas-Purification and Dust-Removal Installations, which was organized not so long ago, is doing an immense amount of work. About 300 industrial enterprises have been inspected, all sources of pollution have been revealed and technical and organizational measures have been worked out for eliminating each of them.

It would seem that there is no reason for concern in our city. But the protective measures we have discussed make it possible only to halt the growth of pollution. The task is broader -- not only to maintain, but also to improve the air basin. And this problem must be solved primarily through increasing the workers' discipline.

Let us take, for example, the Leningrad TETs's. Sanitary and epidemiological stations and inspection teams have large complaints against them. The impression is being given that Lenenergo is stubbornly ignoring questions of protection of the environment: neither warnings nor fines have been effective. There is a threat that TETs-2, which is located in the center of the city, will be closed down. The deadline for reconstructing two old electric filters was past long ago; the work is being held up because of the fact that Lenenergo has not been given money. It looks as though the situation will not change this year either: the plan for reconstruction included only one-fourth of the necessary expenditures.

TETs-14 and TETs-17 require replacement parts and filtering. The plan for reconstruction has been submitted. But the matter is still at a standstill, though in March of last year an order was issued for Lenenergo, prohibiting the operation of malfunctioning and outdated equipment.

Of course, it is impossible to do everything immediately. The construction of purification devices that are 20 meters high is a costly and long-term matter. One cannot replace existing transportation with ecologically harmless motor vehicles in a short period of time either. Apparently, one should not count on radical improvements in fuel technology in the next few years.

But even today the air around us can be much cleaner. And this can be done with minimum material expenditures or without expenditures at all. In resolving problems of ecology, the guarantee of success lies in high responsibility of people involved with it.

Unfortunately, cases of a thriftless attitude toward the land, water and air are frequent. The problem of making the air basin around transportation

arterials more healthful is especially critical. An inspection conducted by the City Automobile Inspection Team and the sanitary and epidemiological station showed that 70 percent of the passenger and cargo vehicles in Leningrad leave their lots with defects that cause increased pollution of the air with exhaust fumes. It has been calculated that, as a result of correct operation and regulation of carburetor engines alone, discharges could be reduced by one-third.

It is worth thinking about the expediency of certain shipments. For TETs-7 on Vasil'yevskiy Island, 80 powerful MAZ trucks each day travel through the entire city to deliver fuel oil from the base in Nevskiy Rayon. Can this not be avoided. Perhaps a storage barge could be docked on the shore. The harbor is right next door.

There are also reserves at enterprises. The Lentrublit Plant discharges carbon monoxide because it operates old cupola furnaces that do not have gas purification devices. And at the same time, two new ones equipped with modern filters which have been assembled have been standing unused since 1975.

The attempt to install self-recording instruments that register the concentration of discharged substances also brings active resistance on the part of the enterprises. Some time ago the Giprotsement Institute introduced its development at the Cement Plant imeni Vorovskiy. At the same time it was necessary to install automatic recording instruments on the filters. Then the instruments were removed. And no efforts on the part of the inspection team helped. The plant directors nicknamed the potentiometers "informers" and did not wish to keep them.

But the control instruments can do them a good turn. When there are none, there is no guarantee that any TETs will not turn off the purification devices at night: it is dark at night and the pipes cannot be seen -- the person on duty can change the aggregates over to idle and rest without worry. The effectiveness of the work of electrofilters decreases by half.

There are blasts of discharges at plants during the night as well. Far from all of these violations can be discovered. The system of automatic 24-hour control has still not been introduced in many places and, naturally, the inspection team cannot inspect each installation daily: it does not have the people or the capabilities for this.

As of today, there is only one solution: to automate this work as soon as possible. And for the time being it is necessary to take fuller advantage of public efforts for control. Practice has shown that among citizens living in the neighborhood of violating enterprises, there is always a direct witness to the disgrace. But there is no telephone number to which one can make notification of this at any time of the day. Therefore there is nobody to fill out a document on the spot.

Of course, control is control, but the main thing is the conscientiousness of the people and their feeling of duty in their work. The time has passed when a forest of smoke stacks signalled the power of the state. But echoes of the psychology of past years can still be heard. But, after all, we live and work not only for ourselves. We are raising children and grandchildren. What will we leave them, what kind of land will we bequeath to them. And the most important thing is the attitude toward nature that we instill in young hearts. We must take advantage of every possibility today in order to restore as quickly and completely as possible the lost ties with nature, in the interests of the present and future generations, as is written in the USSR Constitution.

11772

CSO: 5000

USSR

## ENVIRONMENTAL PROTECTION PROGRAMS OF STATE COMMITTEE ON SCIENCE, TECHNOLOGY

Moscow TRUD in Russian 4 Jun 78 p 2

[Article by L. Yefremov, first deputy chairman of the State Committee of the USSR Council of Ministers for Science and Technology: "Our Home -- The Planet Earth"]

[Text] Man's activity on earth increases each year. New cities, factories and plants are growing and deposits of minerals are being worked. In a number of countries the effects of business and economics have begun to draw the environment out of its dynamic balance. Of all the consequences for nature, such as the exhaustion of the supplies of fuels, the shortage of pure, fresh water, climatic changes and so forth, the most critical is the problem of pollution of the environment with harmful industrial wastes.

According to an estimate of the World Health Organization, mankind is now using about a half million chemical substances, quite a few of which are toxic.

Many capitalist countries sustain quite significant losses from pollution of the environment. For example, in Japan they exceeded 23 billion dollars.

In the USSR the protection of nature and rational utilization of natural resources are a constituent part of communist construction. Implementation of the most important principle of our society, "All in the name of man, all for the good of man," is unthinkable without systematic work directed toward protection and improvement of the natural environment. Therefore the communist party and the Soviet state devote a great deal of attention to a successful resolution of these problems. General Secretary of the CPSU Central Committee, chairman of the Presidium of the USSR Supreme Soviet, Comrade L. I. Brezhnev, when speaking at a meeting of the Presidium of the USSR Supreme Soviet on 16 May 1978, emphasized: "The Soviet Union is doing everything possible to protect nature, its plant and animal kingdoms and its mineral resources. Lenin bequeathed this to us."

Much has been done in our country to improve legislation in the area of the protection of nature and the utilization of nature. This aspect of the activity of the Soviet state was reflected in the new USSR Constitution. Article 18 of the Main Law says: "In the interests of present and future generations, the USSR is taking the necessary measures for protection and scientifically substantiated, rational utilization of the earth and its depths, water resources and the plant and animal kingdoms, for maintenance of the purity of the air and water, and for ensurance of the reproduction of natural riches and improvement of man's environment." The USSR Supreme Soviet adopted the Fundamentals of Water Legislation, the Fundamentals of Forestry Legislation, the Fundamentals of Legislation on Minerals and the Fundamentals of Land Legislation.

In addition to strengthening legal foundations, a large amount of work has been done to improve the organization of administration in this area. The State Committee for Hydrometeorology and Control of the Environment of the USSR has been created. Planning has been improved and a special section has been introduced into state plans for the economic and social development of the USSR, which stipulates assignments for the protection of nature and rational utilization of natural resources. Allocations for these purposes are growing. Under the Tenth Five-Year Plan alone, 11 billion rubles were allotted.

Large jobs are being carried out. Several thousand complexes for purifying waste waters have gone into operation. In recent years there has been a marked reduction in the consumption of fresh water in all branches of industry. Thus to produce a ton of steel we expend about 240 cubic meters of water, of which 40 are fresh water. Recycling of water has been introduced at the Lisichansk Oil Refinery, the Almalyk Chemical Plant and a number of nonferrous metallurgy enterprises. A unique water recycling system is being developed for the Baykal Pulp and Paper Combine. Practically all new enterprises that have been put into operation are equipped with highly effective installations for purifying gases and removing dust.

A most important factor in successfully solving problems of the protection of nature and rational utilization of natural resources is scientific and technical progress. The State Committee of the USSR Council of Ministers for Science and Technology, in conjunction with ministries and departments, has developed comprehensive interbranch scientific and technical programs for the period up to 1980. They envision the creation of methods of rational utilization of water resources, taking into account the proposed diversion of part of the flow of northern rivers into southern regions of the country as well. They will be used to develop new methods, equipment and materials for purifying waste and natural waters and gas-dust discharges as well as for utilizing processing by-products. Instruments and systems for observing and controlling the condition of the environment will also be developed. Much scientific research and experimental design work will be done.



These programs are being successfully carried out. Thus, for example, during 1976-1978 work was done to create waste-free systems of water supply for the Tobol'sk industrial petroleum complex, the Krasnodar combine for biochemical and vitamin preparations and the Kalush Khlorvinil Production Association. Their startup will make it possible not only to utilize water more efficiently at these enterprises, but also to disseminate their experience in order to design similar systems in other branches of industry.

Design work has been completed and construction has been started in Mozhaysk on installations for biological purification of city waste waters with flotation separation of the sludge impurities, which considerably reduces the production areas occupied by purification installations as a result of the compactness of the flotation chambers.

A system for purifying and cooling gases in the production of nepheline was created ahead of schedule and the bugs have been worked out under industrial conditions. It makes it possible to shorten one phase of purification and provide for the observance of sanitation norms. The startup of this system during the reconstruction of the Kirov mining and chemical association will reduce the area occupied by gas purification installations by half.

Important research and technical developments, particularly for improving technology, are being done within the framework of branch programs, especially in the chemical, petrochemical and petroleum processing industries, ferrous and nonferrous metallurgy, power engineering and other branches.

In 1977 the petrochemical industry introduced new technological processes at the Kadiyevka plant for industrial carbon, the Baku Neftegaz Plant and also the Nizhnekamsk petrochemical combine. As a result, the discharge of waste waters will be reduced because of their utilization in the recycled water supply system.

The chemical industry has developed a process for obtaining sulphuric acid under pressure, which makes it possible to reduce discharges into the atmosphere to one-half to one-third the present level. In 1979 it is planned to start up an experimental installation for working this method at the Gomel' chemical plant.

But there are still many shortcomings and unsolved problems in the area of the protection of nature and efficient utilization of natural resources. In order to improve the condition of the air basin, it is necessary for the USSR Ministry of Power and Electrification to take measures for equipping thermal electric power stations with installations for purifying discharged gases of sulphur dioxide. Certain ministries and departments are slack in introducing technological methods and equipment for utilizing and reprocessing industrial wastes such as [phosphogin], pyrite gas, ash from thermal electric power stations, slag from nonferrous and ferrous metallurgy and wastes from coal enrichment.

The USSR Ministry of Instrument Making, Automation Equipment and Control Systems is not satisfying the demands of enterprises and organizations for the corresponding equipment. It is an important task to establish norms for maximum permissible discharges of gas and waste waters.

An analysis of the course of the fulfillment of the assignments in the programs showed that the introduction of new technological processes for purifying waste waters is being impeded by the lack of an adequate machine building base for the production of the necessary equipment in the Ministry of Chemical and Petroleum Machine Building and the Ministry of Construction, Road and Municipal Machine Building.

It is obviously necessary to improve control and increase responsibility for prompt startup of experimental and experimental-industrial installations for the purification of waste waters, gas discharges and wastes from processing. While taking measures to accelerate scientific and technical progress, it is necessary to increase the demands made on all economic agencies and organizations for stepping up practical activity in the area of the protection of the environment.

The protection of nature, the replenishment of natural resources and the protection of the biosphere from pollution constitute an objective need today. Fuller satisfaction of the material and spiritual needs of all members of the socialist society depend on this.

11772

CSO: 5000

USSR

# SAKHALIN HIT BY HEAVY RAINS, FLOODING

Vladivostok Maritime Service in Russian to the Pacific Far East 0700 GMT  
29 Jul 78 OW

[Recorded report by correspondent Karl Lauva from Sakhalin Oblast--date not given]

[Text] A drought on Sakhalin does sound like a paradox, but specialists were ready to admit that this year, an anomalous year in their opinion, such a threat was in store. And then all of a sudden the rains came. Such heavy rain has not occurred very often.

Torrents of water kept pouring from the overcast sky for 3 days in succession. Rivers became turbulent and flooded over their banks as a result of the newly formed streams draining into them. In many places roads and railway tracks were washed out and bridges knocked out.

The calamity hit the island's western coast with exceptional force. Sovetskaya Ulitsa, a central street in Kholmsk, became a rapid river. [words indistinct] blocked up thoroughfares. It looked as if life would come to a standstill, but this did not happen. The city's transportation did not stop, all enterprises, stores, public service establishments, movie theaters, and communications facilities continued operations, and electric power and water were supplied.

The city's construction organizations and enterprises rushed all equipment to fight the flood. Machine operators did not leave the cabs of their bulldozers, excavators, and dump trucks day and night. Selflessness and discipline did not allow the elements to get out of hand. These qualities were especially evident in the seaport. The normally calm river there flooded railway tracks by the ferry crossing, as well as warehouses, the container area, and other economic facilities. The staff organized to combat the elements, headed by Port Chief Tukher, assigned repair brigades to take care of emergency work. Hundreds of bags of gravel and cement were used to create a man-made channel in order to divert water into the sea.

Children vacationing at the imeni Yuriya Gagarina Pioneers' Camp were also in trouble. Passage to the bridge was nearly cut off by water, which approached the food warehouse and the boiler room. But fodder procurement workers from the production and transportation fleet base, working nearby, came and helped the children in time.

The calamity has passed but traces of destruction caused by the flood remain. Residents of Sakhalin are cleaning up in a selfless and organized manner.

CSO: 5000

USSR

### BRIEFS

AUTOMATIC CONTROL STATION--By G. Namatalashvili, Tbilisi. Automatic stations for monitoring water quality, developed by the Tbilisi scientific-production association "Analitpribor," make it possible to detect routinely sources of pollution of water bodies and to alert the appropriate services about them. The instrument array installed at the station can take measurements of temperature, water level, amount of suspended particles, the concentration of dissolved oxygen and other parameters. All the data go on a teletype, which gives the final result in the form of a teletypogram. The automatic quality monitor will make it possible to improve the work of the sanitary-epidemiological services and to increase the effectiveness of purification facilities. Eleven sets of the new measuring system have been manufactured for the river "health services" of Moscow and its environs. [Text] [Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 15 Jun 78 p 2]

CSO: 5000

## TURKEY

### ISTANBUL RENOVATION EFFORTS HARSHLY CRITICIZED

Istanbul MILLIYET in Turkish 29 Jul 78 p 2

[Text] Within 3 or 4 years the Fenerbahce-Bostanci area of Istanbul has completely changed. Two and three story houses have been razed to be replaced by giant 15 story blocks. The population of this area has increased four or five-fold. Going to work in the morning is a chore and returning home in the evening is another problem altogether.

Contaminated water spills into the streets at night due to the lack of adequate sewage systems, the drinking water supply is inadequate as is that of electricity, a telephone is an unbelievable luxury and schools now have 2 or 3 times as many students as in the past. With each passing day the sea is polluted under the weight of this load. The housing prices for the buildings which accelerate this process are very high. Five or six million lira apartments are no longer considered unusual. The area in which all of this is taking place is nearly 15 square kilometers in size, roughly 3.75% of the 400 square kilometers called Istanbul. Growth in this area began with the implementation of development plans which have been dubbed "1.8 plans" by development circles. The 1.8 is a coefficient. The area which is to be parcelled for construction is divided up according to this coefficient. An 1800 square meter building may be constructed on a 1,000 square meter parcel or, in other words, 18 housing units may be constructed on 1,000 square meter area. If there were formerly 3 or 4 apartments on each of these 1,000 square meter parcels, how can these old structures survive when permission has been granted to construct 14 apartments in their place? Thus, these beautiful houses with gardens and trees are being destroyed by fives and tens while they are still structurally sound. At least 5 housing units will be gained for each one that is lost. Yet, if these new buildings had been built elsewhere the housing supply would be 20% greater.

Exactly 75 Billion

At this point some quick calculation would be helpful. There is no vacant space nor are there any trees, streams or social facilities in this 15 square kilometer area. And if one estimates that half of this area has been set

aside for roads and other such uses, one is left with 7.5 square kilometers to be divided up into parcels using the coefficient 1.8. Thus, in this area there can be  $7.5 \times 1.8$  or 13.5 square kilometers of construction or more simply put 135,000 units of 100 square meters each. At today's lowest market price of 750,000 lira each, 135,000 housing units are worth a total of 101,250,000,000 lira. If one calculates the construction costs for each square meter at 5,000 lira, then a total capital outlay of 67,500,000,000 would be required for the entire project. In addition, if one calculates the cost for providing each of these completed housing units with deficient and insufficient roads, sewage systems, water electricity, telephones, parks, sports facilities, schools, etc., again using today's lowest market price, one arrives at a figure of 50,000 lira for each unit. If one then adds to this total investment the 6,750,000,000 lira investment made by the public sector, one can see that a total of 74,250,000,000 lira has been invested in this area. The difference between the construction costs and the value of the housing units in this area is 33,750,000,000 lira. This difference is divided up between the land owners and the builders.

#### Where Is The State Planning Organization

What role did the State Planning Organization, which provides incentives for the development of Istanbul, play in the approval of these projects which brought 75 billion lira in investments to an area inhabited by Turkey's highest income groups?

As was feared, the answer is that the State Planning Organization played no role in it. The State Planning Organization did not understand that in a profiteering market the success rate of a development project depends upon a very high investment. It mustn't be forgotten that 15 square kilometers constitutes 3.75% of Istanbul. If the remainder of Istanbul, as well as other decaying cities, principally Ankara and Izmir, are taken into account it comes to light that on the order of trillions of lira have been invested in development. The profits on these investments is at least 3 times the initial investment. What is the public share of this profit? Where is this money invested? It is not too difficult to see, without having firm data on hand, that a portion of it has been consumed by extravagance while the other portion has been invested in plots of land awaiting development rights and in similar development projects.

Why has this process, which has been going on for years right before our eyes, not been investigated? This development, degradation of the environment and the increase in problems stemming from these conditions are causing everyone unrest but no one is focusing on the issue. This imbalanced growth has been incorrectly viewed as inevitable. Meanwhile, billions stand by idly while their future is decided for them. Decay of the cities continues. Who is making the decisions on investments totaling trillions of lira, and with whose authority? Do those who will live in these close quarters for the remainder of their lives plagued by a deficient infrastructure have any say in these decisions?

## Suddenly a Project

If an answer is sought to the questions asked above we must turn to the source of development rights, Development Bill number 6785 and 1605. Article 26 of this bill specifies that a development plan is required for construction projects in municipalities that have a population greater than 10,000. Two types of development plans are spelled out in article 27 of this law; a Reorganization Plan and an Execution Plan.

What is a Reorganization Plan? The Reorganization Plan is defined in the organization section of the Development Law. According to article 18 of that law, the Reorganization Plan shall be understood to encompass at least the land within a municipalities boundaries, including nearby fields if such exist. According to article 21 of the same law: "The Reorganization Plan is an integral plan which outlines the manner in which the parcelled land is to be used by pointing out on existent maps; commercial, industrial, residential and recreational districts, overcrowded or underpopulated districts, districts which have been zoned non-residential, useful locations for building because of their topographical characteristics, communications and transportation lines and other such services. While according to article 19, Development Plan is taken to mean a plan of organization prepared for all of the areas cited in article 18 of these regulations or execution plans prepared in accordance with the same.

## No Place in The Law

Everyone knows that the Istanbul Reorganization Plan has not been implemented for years. For years it has not been possible to determine the most suitable, productive and beneficial arrangement for the city. In that case, what is the "1.8 Plan"? The name we find on the documents in question is this: "The 1/5000 Scale Bostanci-Erenkoy District Development Plan". Despite all our efforts we are unable to find anything called a "district development plan" within the Development Law or Reorganization Regulations. If this is so, is the 75 billion lira investment decision legal? If it was not made in accordance with the Reorganization Plan then what plan was it made in accordance with? What about the scientific validity of the 75 million lira investment? Yet these plans were drawn up by the Istanbul Municipality Planning Directorate, they were endorsed by the Istanbul Municipality Development Commission by their tacit approval, they required a Municipal Assembly decree, the Reorganization Plan Bureau expressed its views on these plans and in the end they were examined and approved by the Housing and Reconstruction Ministry's Planning and Development Directorate. Authorities defend these plans against those who would oppose it by saying: "If these plans had not been drawn up the results would have been much worse." They contend that more orderly housing has been obtained by means of these plans. There are even those who see this as a great success. Considering the existence of the Development Law and Regulations, it is inconceivable that the development statutes would be used in such a way. How could a body of statutes be arranged in such a way that they trample the principles of the law and other regulations or in such



a manner that they would bring about just the opposite of the results which were envisioned by the law? Or how could such statutes be applied to absurd plans which can be found neither in the law nor in the regulations and whose shortcomings are justified as "the lesser of two evils"? The population brought to the area by these plans is 600,000, 4.5 persons for each of the 135,000 housing units. Indefinite "plan" decisions have been made for a 600,000 person settlement, a 75 billion lira investment, and the division of 33 billion lira with no apparent legal or scientific basis. This is a clear example of how development planning machinery works!

#### This Is Not A Solution

What sort of effect does this type of decision and action have upon the planned development envisioned for the third five-year planning period? How many 75 billion lira developments are being drawn up within the framework of this development plan? Which of these are being implemented with such great speed? Billions are being made and divided up by means of "development incentives" that are made outside of all channels of control and in complete violation of all comprehensive development objectives such as the mobilization of resources, planned development and the prevention of extravagant spending. Everything is totally confused and we have arrived at an impasse similar to the one the cities find themselves in. The first and most urgent thing to be done is the elimination of separate planning for the cities and for development. Housing and reconstruction operations must be conducted within the boundaries of the law. Immediate steps must be taken to control the unrestrained billions who are degrading the environment and those who are responsible for the mistakes and murky relationships surrounding this issue. The losses have already been great. If immediate steps are not taken, at the very least all hope of creating an environment which is suitable to human needs will be lost as will the possibility of properly organizing development in the urban areas.

CSO: 5000

TURKEY

BRIEFS

SMOKELESS COAL FOR ANKARA--The Ankara Municipal Government, in conjunction with the Turkish Coal Works, has reached an agreement on the sale of smokeless, high quality coal to the people of Ankara in an attempt to reduce air pollution in the capital. According to the agreement, henceforth "Tuncebilek + 18" and "Tuncebilek + 30" coal will be sold by Ankara fuel distributors and police officials will conduct ongoing supervision of the coal sold by the private sector in the capital. Dealers who sell coal that is not of the proper quality will be taken into custody by the police and charges will be filed against them. In other news, Ankara Mayor Ali Dincer reported that a massive reforestation effort is underway as another part of the effort to reduce the level of air pollution in Ankara. He stated that at least 100,000 trees will be planted in Ankara by November of this year. Dincer added that the trees to be planted will consist mainly of maple, chestnut and pine trees which are long-lived and broad-leafed. [Text] [Istanbul CUMHURIYET in Turkish 31 Jul 78 pp 1, 9]

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END